

**BY ORDER OF THE COMMANDER
KIRTLAND AIR FORCE BASE**

**KIRTLAND AIR FORCE BASE
INSTRUCTION 91-203**



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Safety

**SAFETY AND SCHEDULING OF FIELD
ACTIVITIES AND TEST SITE OPERATIONS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 91-2, *Safety Programs* and creates the Controlled Firing Area Committee (CFAC). It applies to and prescribes procedures for coordinating the planning of any testing, demonstration, exercise, or other activity to be accomplished in an outdoor area on Kirtland Air Force Base (KAFB) to ensure de-confliction of schedules and events, particularly those with high safety risks, involve flight operations, or have the potential to negatively impact non-participant personnel or facilities. It details notification requirements, and procedures for review and establishment of test and operational limitations for these events. This instruction also applies to research and development laboratories and restoration operations within withdrawn land boundaries. This instruction applies to every user who has an outdoor propagation; explosives, laser, directed energy, or unit exercises on KAFB and the withdrawn area. This publication applies to the Air National Guard (ANG) and Air Force Reserve Command (AFRC). It also includes all Army and Marine Corps units training on KAFB. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Air Force Records Disposition Schedule (RDS) located at

<https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. See **Attachment 1** for a Glossary of References and Supporting Information.

SUMMARY OF CHANGES

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This interim change adjusts and clarifies radio frequency requirements for testing in paragraphs 1.8.12 through 1.8.12.3. A margin bar indicates newly revised material.

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1. Program Responsibilities.

1.1. 377 ABW Commander (377 ABW/CC):

1.1.1. Will terminate, prohibit, or suspend immediately any test or activity in Department of Defense (DoD) fee owned and DoD public withdrawn lands detrimental to:

1.1.1.1. The public health and safety.

1.1.1.2. Property (either public or private).

1.1.1.3. Any national security interest of the United States.

1.1.2. Will coordinate with Department of Energy National Nuclear Security Administration (DOE/NNSA) for immediate termination, to prohibit, or suspend any test or activity on DOE fee owned or DOE public withdrawn lands detrimental to:

- 1.1.2.1. The public health and safety.
 - 1.1.2.2. Property (either public or private).
 - 1.1.2.3. Any national security interest of the United States.
- 1.2. 377 ABW Weapons Safety Office (377 ABW/SEW):
- 1.2.1. Will serve as consultant to CFAC members.
 - 1.2.2. Will accept projected schedules from responsible agency.
 - 1.2.3. Will consolidate and distribute schedules for CFAC Core member's review and approval.
 - 1.2.4. Will maintain master schedule of events.
 - 1.2.5. Will distribute schedule and changes to appropriate distribution lists. **Note:** All organizations must coordinate scheduled inputs through their safety officer, prior to submitting to the CFAC. Department of Energy, National Nuclear Security Administration, Sandia Site Office (DOE/NNSA/SSO) is the cognizant authority for Sandia National Laboratories (SNL) under contract to DOE/NNSA. SNL is responsible for developing, reviewing, approving appropriate procedures in compliance to contract requirements. Therefore, documents submitted between SNL and KAFB under the scope of this instruction will be submitted through the DOE/NNSA/SSO, Environment, Safety & Health (ES&H) Office.
 - 1.2.6. Will ensure safety precautions have been taken for all tests and training exercises by reviewing and coordinating, as applicable, on written procedures (operating instructions (OI), safety annexes, Risk Management (RM) procedures, etc.) required for each operation.
 - 1.2.7. Will de-conflict any safety or scheduling issues between agencies conducting high-risk tests, training exercises, or flight operations.
 - 1.2.8. Will have authority to prioritize, delay or cancel conflicting operations when it is apparent that a scheduling conflict cannot be resolved.
 - 1.2.9. Will serve as observer for the 377 ABW/CC and monitor a sample of tests/training exercises conducted by DoD and DOE agencies or their contractors. 377 ABW/SEW will make prior notifications to respective testing organization for entry to test area(s). **Note:** 377 ABW/SEW does not have oversight authority over DOE or their contractors.
- 1.3. Fire Department (377 MSG/CEF):
- 1.3.1. Will serve as consultant to CFAC members.
 - 1.3.2. Will review all DOE Combat Defense Field Training Exercise Plans (when applicable) to ensure awareness of any potential fire hazards.
- 1.4. **Real Property (377 MSG/CECR) will coordinate Real Property requests through 377 ABW/SEW.**
- 1.5. **Environmental Management (377 MSG/CEAN):**
- 1.5.1. Will serve as consultant for environmental program efforts for DoD organizations.

- 1.8.3. Will brief the CFAC of new or increased hazards affecting a CFA.
- 1.8.4. Will, for explosives or directed energy events, notify affected agencies using the notification checklist prior to the start of all test or training exercises (See [Attachment 3](#)).
- 1.8.5. Will designate a Range Safety officer (RSO) and a point of contact (POC) for each test/training exercise to ensure clear zones are established and maintained prior to and during test operations. Test Director/Manager will be appointed as the Range Safety Officer responsible for safety and surveillance of the area.
- 1.8.6. Will, in case of misfire, follow applicable test plan safety procedures.
- 1.8.7. Will obtain approval from owning organization prior to performing tests/operations at their sites.
- 1.8.8. Will upon termination of project, test, operations, etc., return the land (area) to original condition as identified in Memorandum of Agreement or understanding (MOA/MOU) and/or land use agreements.
- 1.8.9. Will coordinate with 377 ABW/SEW prior to accomplishing any site surveys, preliminary tests, construction, demonstration or exercise activity.
- 1.8.10. Will submit Crash Grid Coordinates of exact locations for operations (see Attachment 4).
- 1.8.11. Will notify 377 MSG/CED Explosive Ordnance Disposal (EOD) and Air Base Wing Command Post (377 ABW/CP) of any and all unexploded ordnance (UXO).
- 1.8.12. Each organization operating Radio Frequency (RF) emitting devices on KAFB which does not have a local or national Radio Frequency Authorization (RFA) must contact the Installation Spectrum Manager (377 MSG/SCOT) at (505) 853-3769/7426, DSN 263 who will assist in obtaining spectrum support. Each organization will provide the ISM with information contained in Table 2. If the RF equipment being used or tested does not have an approved spectrum certification also known as J/F 12 number, (Equipment Allocation number given by J-12 working group), then the ISM can assist in submitting a spectrum certification application will be routed to the national level for spectrum support. – (Reference Para 3.1.7.5. of AFI 33-580). Classified radio frequency support will be submitted via SIPRNET and adhere to all applicable Information Assurance regulations and policies.
 - 1.8.12.1. Each organization will schedule and coordinate radio frequency use with the Kirtland Installation Spectrum Office in addition to the CFAC schedule. This will allow the Installation Spectrum Manager to coordinate and notify spectrum use with the proper spectrum channels which includes the DoD Area Frequency Coordinator (AFC). The DoD AFC is responsible for any system, including airborne operations, within the AFC's AOR – paying particular attention to the radio horizon where it extends into the DOD AFC geographical boundaries – (Reference Para 2.2.3.3. of AFI 33-580).

Table 2. RADIO FREQUENCY (RF) EMITTER INFORMATION

Bldg. # or Location	Equipment Type	Antenna Name	Pulse Width (ms)	Average Power (W)	Peak Power (W)	Frequency (MHz)	Antenna Gain (dB)	Equipment Certification Number (JF/12)

1.8.12.2. Each organization will provide a copy of a Radio Frequency Authorization or provide documentation in which spectrum use has been coordinated through the Kirtland Air Force Base Installation Spectrum Office. (Reference Para 3.1.7.2. of AFI 33-580).

1.8.12.3. Electronic Attack, formerly known as Electronic Countermeasures, which includes both electronic jamming and chaff dispensing operations will not be authorized without a National Electronic Attack Clearance. Electronic Attack approvals have been developed through formal agreements between DOD and other federal agencies such as the Federal Communications Commission, Federal Aviation Administration and are documented and disseminated via the CJCSM 3212.02C.

1.8.13. Will ensure a valid AEHD-AQD permit is obtained prior to conducting any open burn/open detonation activities on KAFB ranges. A KAFB internal application for detonations less than 2,000 pounds must be submitted to 377 MSG/CEAN Air Quality personnel at least 48 hours prior to the scheduled event. For events greater than 2,000 pounds, DoD organizations must contact 377 MSG/CEAN Air Quality personnel ten working days prior to the scheduled event for permit application preparation.

1.8.14. Each DoD organization firing weapons on any KAFB range will report ammunition information (to include stock number, round description, quantity expended) to 377 MSG/CEAN to comply with EPCRA TRI reporting requirements. The organization will also turn in KAFB Form 600, after range use to Environmental Sustainability (377 MSG/CEAN).

1.8.15. Will Complete and submit to 377 MSG/CEAN an AF Form 813 IAW National Environmental Policy Act (NEPA), when determined to be necessary. Determination of this requirement will be coordinated through the 377 MSG/CEANQ, NEPA Program Manager.

1.8.16. Will release any backup days not required.

2. Risk Management (RM)/System Safety Review Process.

2.1. All organizations conducting test and evaluation programs, training exercises involving use of explosives, or directed energy will perform RM assessments. Any hazard analyses that meets the intent of RM such as the System Safety Permit process defined in AFI 90-901 *Operational Risk Management* or AFI 91-202 AFRL Sup1, *US Air Force Mishap Prevention Program*, prior to commencing activities. All RMs for explosive exercises will meet all criteria in AFI 90-901 and AFMAN 91-201. RMs are not required if test and exercise operations are covered under a range standard operating procedure and/or an explosive safety site plan. Based on mission requirements, assess risks to people, equipment, facilities, and

the environment. Identify and implement control measures to mitigate risks to an acceptable level. Includes organizations performing maneuvers, compass training, etc; this includes activities that are not using explosives.

2.2. All organizations conducting test and evaluation programs will coordinate RM assessments through organizational directors and submit to 377 ABW/SEW for review; 377 ABW/SEW will forward to 377 ABW/SEG for review of ground issues and then to the appropriate level for approval. RM assessments must be maintained as a “living document” by the user, and updated as necessary, throughout the life cycle of the test, evaluation program, or training exercise. Approved RMs well, once approved and signed by the Commander, will be forwarded to and maintained by 377 ABW/SEW.

3. Test Restrictions.

3.1. Fire Danger: Operations during Very High and Extreme fire danger conditions will be evaluated and conducted based upon mission requirements and impact (see [Attachment 1](#)). An RM will be submitted to 377 ABW/SEW for review. Tests with high probability of starting a fire will not be conducted if sustained winds are over 25 Miles per Hour (MPH) during Very High and Extreme fire danger without taking approved measures to prevent the wild fire. Review will include 377 MSG/CEF.

3.2. Low Visibility: Class IV or V tests will not be conducted when visibility is less than 5 nautical miles (5.75 statute miles) or the ceiling is less than 1,000 feet above the highest altitude of expected fragmentation at the test site. No projectile is to enter any cloud formation because overcast or heavy cloud cover could conceal an aircraft.

3.3. Meteorological Conditions: Class IV or V tests will not be conducted when meteorological conditions favor sound wave propagation that could be hazardous to personnel or cause property damage. All test agencies will perform evaluation of sound-wave propagation conditions. Contact base weather office, 846-9707, for information.

3.4. No-Burn Days: Applicable from 1 October through end of February each year. Refer to the City of Albuquerque Air Quality web site at <http://www.cabq.gov/airquality/noburn.html> or call 505-768-BURN (2876), or contact Environmental Sustainability Compliance (377 MSG/CEANC) for information regarding No-Burn days prior to conducting all outdoor explosive tests.

3.5. Spotters: will be used for all Class I through VI tests, sled track tests, and training exercises where explosives items are used. Spotters will have communications with the project officer or test coordinator. Suspend or terminate test activities if personnel, vehicles, or aircraft approach or enter the hazard area.

3.6. Outdoor Combat Arms Training and Maintenance (CATM) Range East (M-60) Range: Due to the remote location and limited access for firefighting operations, the following restrictions are established on the CATM Range East:

3.6.1. Tracer ammunition will not be fired at any time.

3.6.2. Organizations will provide ammunition stock numbers (if not on the unit's 377 ABW AF Form 2047, *Explosive Facility License*, or established program like the 58 Special Operations Wing (58 SOW) “War Wagon”) to 377 ABW/SEW for review and approval prior to each firearms training session.

3.6.3. A minimum of 5 water filled (or equivalent pressurized) fire-extinguishing devices will be on hand during each firing session.

3.6.4. Shovels and rakes will be on-hand during all sessions.

3.6.5. Firing line and impact areas around targets will be kept brush free.

3.6.6. Minimum manning requirements for live fire training will be two personnel and will be on official business.

3.6.7. Range Master must have communication link to emergency responders.

3.6.8. Conduct sweeps of the range and surrounding perimeter after training is completed to ensure there are no hot spots.

3.6.9. Red Flag will be flown indicating the range is active.

3.6.10. The range will be cleaned up of all brass and trash after each training session.

3.6.11. All visiting units will be trained on range operations and Range RM by 377 SFG/S4C Combat Arms Training and Maintenance (CATM).

4. Scheduling of CFA. Controlled Firing Areas shall be scheduled on the basis of a priority system that gives equitable consideration to all Government Agencies. 377 SFG will have priority on their range, CATM Range East. Depending on the location of the test/operations, submit the following forms/documents:

4.1. CFAC Test/Exercise Schedule in Excel format (See **Table 1**). Requests not in proper format are subject to return and delay of test.

4.2. RM Assessment to 377 ABW/SEW on DA Form 7566 or equivalent.

4.3. DoD controlled areas: Submit an AF Form 813 to 377 MSG/CEANQ.

4.4. DOE controlled areas: NNSA/SSO approves the DOE Environmental Checklist. Contact NNSA/SSO Environmental Team Leader at 845-5542 for the required forms and approval.

4.5. Mishap Response plans with following information (at a minimum, if not included in the Test Plan/RM or RA):

4.5.1. Specific location.

4.5.2. Most direct route to location.

4.5.3. Operation being performed (explosives/hazardous materials involved, navigation, etc).

4.5.4. Emergency reporting procedures (who will report, how will it be reported, escorts required to remote location, etc.).

4.5.5. Type emergency response required (medical, fire, air evacuation). **Note:** For emergency requests via cell phone dial 853-9111.

5. Notifications. Notification checklists will be tailored to location, organizations affected, hazards, and operation being performed. **Note:** If an unscheduled emergency Class I through V disposal operation is required, the agency involved will call 377 ABW Weapons Safety Office, 846-9142/846-4229, and run appropriate telephone notification checklist.

5.1. NOTAM. Test plans for unique tests and Class III through VI tests will be reviewed by the FAA for determination of NOTAM requirements (through monthly CFAC meeting or email). If the FAA determines a NOTAM is required, the test program manager will call in, or e-mail the NOTAM, to Airfield Management (377 MXG/MXOA, 846-8335). Send the information at least 24 hours before scheduled test. Operating hours are 0700-2100, Monday through Friday and 0800-1700 Saturday and Sunday. Information must include date, time, location, and altitude. Disseminate this information as an “L” series NOTAM.

5.2. **Telephone Notification.** Responsible Agencies will notify affected agencies for Class III through VI and sled track operations by running the telephone notification checklist (See [Attachment 3](#)).

Table 3. Notification Format Example

REQUIRED INFORMATION	EXAMPLE
Organization	377 MSG/CED
Test date and time	01 Apr 12, 11100L
Areas Affected	Aux Field, MUNS Haul RD
Location (Test Site and Grid Coord)	Chestnut, 589690
Class of Test (I through VI or A/B for sled track)	V
Net Explosive Weight	50 lbs
Hazard	Blast/Fragment radius in feet for all hazards 1250 feet/Blast, Smoke/Fire/Dust, flash/fireball etc.
Hazard distances for directed energy tests	Non-eye safe within 50 meters, kilometers, etc.
Person making notification	MSgt Smith, 846-5555

6. Unscheduled Tests/Operations and Changes. Time critical unscheduled tests or operations will be approved on a case-by-case basis. Submit requests via approved electronic format to 377 ABW/SEW for review and submittal to the CFAC. (377ABW.CFAC@KIRTLAND.af.mil). Schedule changes need to be submitted by 0800 the day before for review and approval. Submit any new test or operations at a minimum of three duty days prior to the event for review and approval.

7. Chestnut Test Site Procedures. The formal cooperation outlined herein specifically addresses scheduling of range, test site preparations, test bed locations, notification of testing, Safety, Security, post-test clean-up and overall test coordination among parties involved. Use of Chestnut Test Site will be in compliance with this instruction and the requirements set forth in the Memorandum of Understanding between the 377 Air Base Wing, The Department of Energy, The Defense Threat Reduction Agency (DTRA), and the Air Force Research Laboratory (AFRL).

7.1. Range Scheduling. The AFRL/RDOT Test Office will be the central point of contact for scheduling all tests conducted on Chestnut Test Site. This is to include work performed by contractors on test and non-test days. Agencies are required to provide a POC and an escort for contractor personnel working on the range. The responsible test organization must also schedule their activity with Controlled Firing Area Committee.

7.2. Test Site Preparations. Coordinate with AFRL/RDOT and 377 ABW/SEW prior to accomplishing any site surveys, preliminary tests, construction, demolition, installation, demonstration or exercise activity. Any major improvements or long term planning for structures, targets or assets must be coordinated with AFRL/RDOT and 377 ABW/SEW annually.

7.2.1. Digging and hot work permits must be obtained from the appropriate 377 ABW organization prior to performing those activities. Installation or construction of permanent occupied facilities is not authorized.

7.2.2. Prior to the start of any test series all plans and drawings (electronic and hardcopy) will be presented to AFRL for review/approval. This requirement will eliminate planning of actions that are not permitted on the range or conflict with another test series.

7.3. Test Site Locations. Three criteria will be considered when choosing a test location on Chestnut Range. They are:

7.3.1. The proposed action at the selected location must be consistent with the Environmental Assessment for the area.

7.3.2. The air blast, fragmentation, ground shock, or ejecta from the proposed action must not damage surrounding unprotected buildings, subject personnel to possible injury, damage optics at Starfire Optical Range (SOR), or misalign heliostats at the Solar Power facility.

7.3.3. The proposed location must have a suitable geology for the test. See [Attachment 4](#) for test site locations.

7.4. Safety. Test organizations must prepare and submit a safety operating plan (SOP) and RM/hazard analysis for each explosive operation to AFRL/RDOT and to 377 ABW/SEW. The parties involved will comply with all applicable DoD and AF safety regulations and standards, in addition to the following safety responsibilities.

7.4.1. The Organization conducting tests will ensure all personnel are evacuated to a safe location at time of detonation or when required by specific test SOP.

7.4.2. Personnel evacuated will not reenter the evacuation zone until the organization conducting the test has given an all-safe notification.

7.5. Post-Test Clean-up. Each test organization is responsible for cleaning up the test bed at the conclusion of the test series. Test structures, targets or assets left in place beyond one year must be justified and approved by AFRL/RDOT and 377 ABW/SEW. The location and use of all existing test structures must be identified to AFRL/RDOT by 30 Sep (annually) with expected completion dates or cleanup dates. This will help reduce remediation costs if the range ever becomes inactive and requires clean-up. No hazardous wastes/ammunition residues, etc., will be left at any test site on KAFB property. Clean-up must occur after each single event or at the end of a series of events on the same day. Residues cannot be left overnight.

7.6. Overall Coordination.

7.6.1. Overall coordination and test notification will be IAW KAFBI 91-203. Proper overall coordination efforts are needed to ensure safety and efficient management of test programs.

7.6.2. When conducting a test program where the clear zone, fragmentation zone or a directed energy type test overlaps into a different range or area, the Test Director will coordinate directly with the affected personnel. This will ensure timely and efficient communications are made which will enhance safety and overall test operations.

7.6.3. The principal parties shall meet as required to discuss the operations to date, problems encountered, and ways to improve the test operations in the future.

7.6.4. Modification or changes to the range must be coordinated and approved through 377 ABW/SEW and AFRL/RDOT.

JOHN C. KUBINEC, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 33-580, *Spectrum Management*

AFI 90-901, *Operational Risk Management*

CJCSM 3212.02C, *Performing Electronic Attack in the United States and Canada for Tests, Training and Exercises*,

FAA Handbook 7400.2, *Procedures for Handling Airspace Matters*

Prescribed Forms

KAFB Form 600 Firing Range Usage Log for Air Emission EPCRA-TRI Reporting

Adopted Forms

AF Form 813, *Request for Environmental Impact Analysis*

AF Form 847, *Recommendation for Change of Publication*

AF Form 2047, *Explosive Facility License*

DA Form 7566, *Composite Risk Management Worksheet*

U.S. Department of Energy Environmental Checklist/Action Description Memorandum (See **Attachment 4**)

Abbreviations and Acronym

AFRC—Air Force Reserve Command

377 ABW/CC—Commander

377 ABW/SEW—Weapons Safety

377 MSG/CEAN—Environmental Management

377 MSG/CEANC—Environmental Management, Compliance

377 MSG/SCOT—Installation Spectrum Manager

58 SOW—58 Special Operations Wing

ABW—Air Base Wing

AEHD—AQD-Albuquerque Environmental Health Department-Air Quality Division

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Material Command

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRL/RDOT—Test Office

AFRIMS—Air Force Records Information Management System

AFRL—Air Force Research Laboratory

ANG—Air National Guard

CATM—Combat Arms Training and Maintenance

CFAC—Controlled Firing Area Committee

CFA—Controlled Firing Area

DA—Department of Army

DoD—Department of Defense

DOE—Department of Energy

DSN—Defense Secure Network

DTRA—Defense Threat Reduction Agency

EOD—Explosive Ordnance Disposal

EPCRA—TRI- Emergency Planning and Community Right-to-Know Toxic Release Inventory

ES&H—Environment, Safety & Health

FAA—Federal Aviation Administration

GBS—Ground Burst Simulators

GRABS—Giant Reusable Air Blast Simulator Site

HERTF—High Energy Microwave Testing Technology Facility

IAW—In Accordance With

ISM—Installation Spectrum Manager

J/F 12—Frequency Equipment Allocation number given by the Military Communication Electronics Board (MCEB) J-12 working group.

KAFB—Kirtland Air Force Base

KAFBI—Kirtland Air Force Base Instruction

LBS—Pounds

MOA—Memorandum of Agreement

MOU—Memorandum of Understanding

NEPA—National Environmental Policy Act

NEW—Net Explosive Weight

NMAC—New Mexico Administrative Code

NOTAM—Notices to Airmen

NNSA—National Nuclear Security Administration

OI—Operating Instruction

OPR—Office of Primary Responsibility

RM—Risk Management

POC—Point of Contact

RA—Risk Assessment

RFA—Radio Frequency Authorization

RSO—Range Safety Officer

RDS—Records Disposition Schedule

RF—Radio frequency

SNL—Sandia National Laboratories

SOP—Safety Operating Plan

SOR—Starfire Optical Range

SSO—Sandia Safety Office

US—United States

USAF—United States Air Force

UTM—Universal Transverse Mercator

UXO—Unexploded Ordnance

Terms

Auxiliary Helicopter Training Field (Aux Field)— Helicopter staging field used by 58th SOW to conduct day and night flight maneuver operations for basic pilot flight and emergency procedures. **Note:** When Aux Field is used on Controlled Firing Area Committee schedule as an affected area, Aircraft will stay off Aux Field while a test of 75 lbs or any test with fragmentation is in progress – Between 10 minutes prior and test complete notifications.

Cancellation:—Problem cannot be corrected during the scheduled date. Run applicable telephone notification checklist; reschedule test through normal CFAC process.

Chestnut Explosive and Fragmentation Limits (see Explosive Site Plans AFMC—Kirtland 01-S01 through S08) -

CN1 Disposal Range Non fragmenting 55 lbs NEW 1250 ft clear zone required 1251 ft established Explosives testing restricted from line designated as CN1 to north boundary of CN2
CN2 Disposal Range Non fragmenting 75 lbs NEW 1384 ft clear zone required 1397 ft established Explosives testing restricted from line designated as CN2 to north boundary of CN8
CN3 Disposal Range Non fragmenting 100 lbs NEW 1523 ft clear zone required 1533 ft established Explosives testing restricted from line designated as CN3 to north boundary of CN8
CN4 Disposal Range Non fragmenting 250 lbs NEW 2067 ft clear zone required 2077 ft established Explosives testing restricted from line designated as CN4 to north boundary of CN8

CN5 Disposal Range Non fragmenting 500 lbs NEW 2604 ft clear zone required 2613 ft established Explosives testing restricted from line designated as CN5 to north boundary of CN8
CN6 Disposal Range Fragmenting 1000 lbs NEW 3280 ft clear zone required 3283 ft established Explosives testing restricted from line designated as CN6 to north boundary of CN8
CN7 Disposal Range Fragmenting Munitions greater than 5inch 1813 lbs NEW 4000 ft clear zone required 4010 ft established Explosives testing restricted from line designated as CN7 to north boundary of CN8
CN8 Disposal Range Fragmenting Munitions greater than 5inch 2000 lbs NEW 4133 ft clear zone required 4140 ft established Explosives testing restricted to CN8 only

Chestnut “No Fly” Zone— Aircraft will stay west of Chestnut Test Site and Slide D during testing (crash grid coordinates 582682 to (at 0* GN) 582708) for 8 lbs fragmenting charges and 75 lbs non-fragmenting charges.

Controlled Events—Any operation other than explosives or directed energy tests that require personnel or equipment to be within or near a Controlled Firing Area. Includes training maneuvers, environmental surveys, and flight operations.

Controlled Firing Area (CFA)—Any open outdoor area where tests and/or training exercises are conducted within the boundaries of KAFB.

Controlled Firing Area Committee (CFAC)—Representatives of units and agencies that routinely use test or training areas or direct tests on KAFB.

Controlled Tests (CT)—Any explosives or directed energy tests or experiments, explosives disposal operations, or field explosives demonstrations, conducted on KAFB that may create a visual or sound disturbance or hazard to personnel, equipment, structures, or aircraft flying in the area.

Coordinating Agency—Agency responsible for processing the advance written notifications and ensuring there are no conflicts between agencies conducting Controlled Tests or Controlled Events. The 377th Air Base Wing Weapons Safety office (377 ABW/SEW) is the coordinating agency for all Department of Defense (DoD) and National Nuclear Security Administration (NNSA)/Department of Energy (DOE) organizations including DoD and DOE contractors who use the CFA.

Directed Energy Tests—Any outdoor that involves laser or high power microwave energy.

Fire Danger Rating—Fire danger level takes into account current and antecedent weather, fuel types, and both live and dead fuel moisture. Potential fire hazards established daily by Sandia Ranger District of the US Forestry Service: <http://www.fs.fed.us/land/wfas/wfas23.html>.

Note: Sandia Ranger District of the U.S. Forestry Service recommends KAFB (to include withdrawn area) to be one level above the Cibola National Forest Fire Danger Rating. KAFB will never be at a low Fire Danger Rating.

Moderate/High— Restricts fires and smoking to developed test sites. Use of pyrotechnics or Blank/SIM ammunition will be permitted on the developed test sites in approved sandbagged/pitted areas and on the black-top of “No Sweat Boulevard”; vehicles are restricted to paved or dirt roads or low-grass areas.

Very High— Restricts fires, smoking and pyrotechnics. Smoking is permitted in non-Government vehicles or approved smoking areas only. Use of pyrotechnics is permitted only in

approved sandbagged/pitted areas; vehicles are restricted to paved or graded roads. “Burn Site” testing that emits embers with sufficient thermal capacity to start a fire outside of the cleared facility area is not allowed. Welding operations restricted to areas cleared of weeds and other materials capable of burning, to 35 feet.

Extreme— Restricts fires, smoking and pyrotechnics. Use of pyrotechnics will be approved on a case-by-case basis to meet critical mission requirements. “No Sweat Boulevard” is off limits to everyone (even if they are not using pyrotechnics) unless specifically authorized by the Department of Energy, National Nuclear Security Administration Sandia Site Office. Suspend non-essential testing operations. No testing at Burn Site that emits embers with sufficient thermal capacity to start a fire outside of the cleared facility area. Welding operations restricted to indoor areas or areas that have been shielded by partitions or welding drapes.

HOLD Condition (Delay): Problem requires more than 60 minutes but can be corrected during the scheduled date—test will be placed in a delay status, run applicable telephone notification checklist.

KAFB Test and Training Site—Areas identified within the boundaries of KAFB where explosives, laser, and microwave energy research and development testing, training maneuvers, or weapons qualifications are conducted (See **Attachment 6**).

Manzano Mountain Controlled Firing Area (MMCFA)—The airspace designated to contain activities that if not conducted in a controlled environment could be hazardous to nonparticipating aircraft. CFAs provide a means to accommodate, without impact to aviation, certain hazardous activities that can be immediately suspended if a nonparticipating aircraft approaches the area. The responsibility lies totally with the CFA user to terminate activities so that there is no impact on aviation (a dedicated spotter will meet this requirement.) There is no requirement for nonparticipating aircraft to avoid the airspace, nor are any communications or Air Traffic Control separation requirements imposed.

Misfire— A misfire occurs when the explosives fail to detonate or partially detonates. An electrical misfire will not be approached for at least 30 minutes after power has been supplied to explosive components. When non-electrical misfires occur, a 1-hour wait time will be observed from the expected detonation or ignition time.

Net Explosive Weight— The total quantity expressed in pounds, of explosives material or pyrotechnics in each item or round; will be expressed in trinitrotoluene (TNT) equivalency.

Notice to Airmen (NOTAM)—A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System), the timely knowledge of which is essential to personnel concerned with flight operations. NOTAM (L) provides local dissemination by voice and other means, such as e-mail and telephone, to satisfy local user requirements.

Risk Management (RM)/System Safety Review—The systematic process of identifying hazards, assessing risk, analyzing risk control options and measures, making control decisions, implementing control decisions, accepting residual risks, and supervising/reviewing the activity for effectiveness. It is a living document that will be updated and changed annually or as applicable. (Contact 377 ABW/SEW for assistance.)

Test Classes—Standardized method of hazard identification to surrounding personnel and/or operations. Classes are established by Net Explosives Weight (NEW), explosives type, sled tracks, directed energy tests, and experiments. (These categories will be used when scheduling CFAC activities.)

Class I—Visual or sound disturbances only, no probability of projectiles or other damaging phenomena. This class includes explosives ordnance disposal (EOD) cartridge actuated tools, thermite grenades, Blank/SIM ammunition, smoke grenades, bivouac operations.

Class II: Minor blast effect, projectiles not propelled beyond 300 feet. Maximum NEW equals 10 pounds of uncased explosives. This class includes C—4, trinitrotoluene (TNT), Data Sheet, blasting caps, detonating cord, blast simulators, or any uncased bulk explosives. Shape charges may or may not be considered cased munitions depending on design. Thin-cased shaped charges may be used and not considered fragment producers as long as they are in a position to not fire the jet upward.

Class III—Overpressure, projectiles, or other phenomena that may be a hazard to unprotected personnel and equipment or airborne aircraft within 500 feet of the detonation point. Maximum NEW equals 64 pounds of uncased explosives on the surface or buried. (This includes the same items listed in Class II.)

Class IV— Overpressure, projectiles, or other phenomena that may be a hazard to unprotected personnel or equipment, and airborne aircraft more than 500 feet from the detonation point. Maximum NEW equals 1,000 pounds of uncased explosives or 750 pounds of NEW cased munitions on the surface or buried. (This includes the same items listed in Class II and III and cased munitions such as projectiles and general-purpose (GP) bombs.)

Class V—Includes phenomena listed for Class IV and may also induce major ground shock or sound waves that could cause damage or noise complaints. Includes all detonations over 1,000 pounds NEW uncased explosives on the surface or buried.

Class VI—Directed energy type tests that include high power laser and high power microwave tests that have the potential to injure personnel or damage equipment.

Class VII—Directed energy type tests that include high power laser and high power microwave tests listed in Class VI, but also have the high explosive hazards of Class IV.

Sled Track—Sled test tracks have the capability to test captive, launch into free flight, and impact test under accurately programmed, closely controlled, and rigorously monitored conditions.

Type A—The sled exceeds 700 feet per second with hazards existing outside Sandia Tech Area 3 to include Chestnut Test Site and the Aux Field (base grid map coordinates; 579725 to (at 0* GN) 580756).

Type B— The sled does not exceed 700 feet per second and no hazards exist outside Sandia Tech Area 3 (base grid map coordinates; 591726 to (at 0* GN) 591736) or Cable Site (base grid map coordinates; 703730).

Radio Frequency Spectrum—The RF spectrum includes the frequencies from 3.0 kHz to 400 GHz. The presently allocated spectrum is from 9 kHz to 300 GHz.

Responsible Agency—The agency or organization conducting a test, demonstration, training exercise, or survey.

Range Safety Officer (RSO)—Test Director/Manager will be appointed as the Range Safety Officer responsible for safety and surveillance of the area. A safe zone/cordon will be maintained prior to and during the time that explosive detonations or directed energy tests are in progress, as mandated by regulations/instructions.

Attachment 2

CONTROLLED FIRING AREA COMMITTEE (CFAC) CORE MEMBERS

Table A2.1. CFAC Core Members

ORGANIZATION	ROLE	TELEPHONE
		846-9142
377 ABW/SEW Weapons Safety	Co-Chairperson	846-4229
DOE/NNSA/Sandia Site Office Assistant Manager, Environment, Safety, and Health (ES&H) Office	Co-Chairperson	845-4320
58th OSS/DOO [Airspace Management] (Auxiliary Helicopter Training Field)	Core Member	853-5979
377 SFS/S4C Combat Arms Training (M-60 Range)	Core Member	846-6102
AFRL/RDOT Directed Energy Directorate, Test Office	Core Member	846-7734
AFRL/Det 8 SE, AFRL Safety Office	Core Member	846-1676
DTRA/CXTS Defense Threat Reduction Agency, Safety & Environmental Branch	Core Member	846-2869
FAA/TWR Federal Aviation Administration Control Tower	Core Member	856-4900 846- 4903
377 SFS/S3T Security Forces Air Base Defense Area (ABD) and Obstacle Course.	Core Member	853-8600
DOE/NNSA/OST DOE, National Nuclear Security Administration, Office of Secure Transportation, Safety	Core Member	845-4818
U. S. Forestry Service (Sandia Ranger District)	Core Member	281-3304
Sandia National Labs – (1534) Mechanical Environments, Validation and Qualification Sciences	Core Member Co-Core Mbr	844-2473 844-6229
Sandia National Labs – Explosives Safety SME (4122)	Core Member Co-Core Mbr	844-8352 284-9307
DTRA Test Support Contractor: (Applied Research Associates)	Core Member	846-1704
377 MSG/CED	Core Member	846-2229
National Training Center (NTC) (DOE live fire Range)	Core Member	845-5170

377 ABW/SEG	Core Member	846-4227
377 MXG/MXOA	Core Member	846-8335
377 MSG/CEF (KAFB Fire Dept)	Core Member	846-8290
150 FW/SE NMANG	Core Member	846-6715
SNL (DEPT 2556) Terminal Ballistic Facility (Gun Site)	Core Member	284-2787

Attachment 3

TELEPHONE NOTIFICATION CHECKLIST

Table A3.1. Notification Checklist

Contact	Phone Numbers	Person Contacted
24 Hours Prior		
Sandia National laboratories Security (Pro Force)	845-3114/844-4657	
377 MXG/MXOA	846-8335/8337	
377 MSG/CEF (KAFB Fire Department) * if test is near Fire Station #4	846-8069	
AFRL/RDS (Star Fire Optical) *if test is near SOR	846-7897	
Solar Tower	845-3426	
58 SOW Flight Operations	846-9482/846-0160	
SNL Only: Air Quality (E-Mail and Fax)	768-1977	
Media relations (E-mail and phone call)	264-9227	
10 Minutes Prior		
58th SOW Flight Operations	846-9482/0160/0143	
377 ABW/CP (KAFB Command Post)	846-3776/3777	
377 MSG/CEF (KAFB Fire Department)	846-8069/6365	
377 ABW/PA – *if test is over 100 lbs	846-5991	
377 WSSS/SSCC (Site Security Control Center)	846-1478/1323	
AFRL/RDS (Star Fire Optical) *if test is near SOR	846-7897	
Albuquerque Airport Traffic Control Tower (TRACON)	99-856-4935/ 4900 /4903/4904	
Solar Tower	845-3426/844-3600	
Immediately After		
377 ABW/CP (KAFB Command Post)	846-3776/3777	
58th SOW/WOC (58th SOW Flight Operations)	846-9482/0160/0143 9482/0160/0143	
377 ABW/SEW (Weapons Safety) All tests explosive	846-9142/4229	

tests over 100 lbs and any test that will draw public interest.		
AFRL/RDS (Star Fire Optical) *if test is near SOR	846-7897	
377 WSSS/SSCC (Site Security Control Center)	846-1478/1323	
As Applicable		
Sandia National Laboratories Security (Pro Force)	845-3114/844-4657	
Environmental	846-6446	
377 MSG/CEF (KAFB Fire Department)	846-8069 /846-6365	
Note: Notification to Kirtland Command Post, 377th Security Forces, Kirtland AFB Fire Dept, and Weapons Safety is mandatory. Depending on test location and whether or not flight or Star Fire Optical is affected, contacts may be added or deleted as necessary.	846-8069 /846-6365	

Attachment 4

CONTROLLED FIRING AREAS

Table A4.1. Controlled Firing Area Listing

Range #	UTM Grid Coordinates	AREA	USE	CONTROLLING AGENCY	PHONE
1	665730	Old 377 SFG Air Base Defense (ABD) Training Area	Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes. Maneuvers and Training	377 ABW/SEW	846-9142 846-4229
2	653716	Explosive Ordnance Disposal (EOD) Range	(INACTIVE) Open detonation and open burning	377 MSG/CED	846-2229
3	643725	377 ABW Training Area: Old Bivouac Area 4 Training Site	Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes. Maneuvers and Training	377 ABW/SEW	846-9142 846-4229
4	652692	Giant Reusable Air Blast Simulator Site (GRABS)	Explosives Research and Development Testing	Defense Threat Reduction Agency (DTRA)	846-2869
5	645702	EOD Training Range: Old BOP Site	EOD Proficiency Training	21st ORD Co	853-7269
	647701	EOD Training Range 7001	EOD Proficiency Training	21st ORD Co	853-7269
	648700	EOD Training Range 7002	EOD Proficiency Training	21st ORD Co	853-7269
6	628693	58th SOW Isleta Training Drop Zone	Training drops from C-130 aircraft	58th SOW Airspace Manager	853-5979
7	598698	Thunder Range	Explosives Research and Development Testing	DOE/Sandia National Laboratories	845-9797
8	589690	Chestnut Test Site	Explosives Research and Development Testing	AFRL/RDOT	846-7734

	588686	Chestnut Test Site CN1	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
	588687	Chestnut Test Site CN2	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
	588687	Chestnut Test Site CN3	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
	588689	Chestnut Test Site CN4	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
	588691	Chestnut Test Site CN5	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
	588693	Chestnut Test Site CN6	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
	588695	Chestnut Test Site CN7	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
	588696	Chestnut Test Site CN8	Explosives Research and Development Testing	AFRL/RDOT	846- 7734
9	638708	377 ABW Training Area around Bldg. 29012	Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes. Maneuvers and Training	377 ABW/XPO	853- 4376
10	589766	DTRA Training Site TS-8	Training	Defense Threat Reduction Agency, Defense Nuclear Weapons School (DNWS/CSUD)	6-0002 3-6977 3-7584

11	598769	DTRA TRNG SITE TS-4 Helo Site	Training	Defense Threat Reduction Agency, Defense Nuclear Weapons School (DNWS/CSUD)	6-0002 3-6977 3-7584
12	614772	DTRA TRNG SITE TS-1; CONVOY SITE	Training	Defense Threat Reduction Agency, Defense Nuclear Weapons School (DNWS/CSUD)	6-0002 3-6977 3-7584
13	603775	DTRA TRNG SITE TS-2; C130 SITE	Training	Defense Threat Reduction Agency, Defense Nuclear Weapons School (DNWS/CSUD)	6-0002 3-6977 3-7584
14	605772	DTRA TRNG SITE TS-3; B52 SITE	Training	Defense Threat Reduction Agency, Defense Nuclear Weapons School (DNWS/CSUD)	6-0002 3-6977 3-7584
15	570780 to (at 185* Grid North) 568768 to (at 125* Grid North) 587754	377 SFG Training Area MUNS HAUL ROAD	Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes. Maneuvers and Training	377 SFG S3T	846- 2631
16	635717	377 ABW Training Area "P" Hill	Maneuvers and training Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes.	377 ABW/SEW	846- 9142
17	608756	377 SFG Training Area Old Obstacle Course	Maneuvers and training Blank/SIM ammunition, Ground Burst Simulators	377 SFG S3T	846- 2631

			(GBS), Smokes.		
18	697709	377 SFG Training Area – CATM Range East	Weapons training	377 SFG S3T	846-6102
19	664700	Starfire Optical Range (SOR)	Research and development	AFRL Directed Energy Directorate (AFRL/RDS)	846-7897
20	682713	AFRL High Energy Microwave Testing Technology Facility (HERTF)	Research and development	AFRL/RDHA	846-5261
21	681712	(HERTF)	Research and development	AFRL/RDHA	846-5261
22	690743 to (at 28* GN) 707775	DOE Training Area - No Sweat Blvd	Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes. Maneuvers and Training	Sandia Site Office/ National Nuclear Security Administration (NNSA/SSO)	845-5542
23	572784	377 SFG Training Pad 5	Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes. Maneuvers and Training	377 SFG	846-2631
24		AFRL Laser Range (2K – 7.5 KM Sites)	Research and development	AFRL/RDOT	846-7734
	570764	2K			
	572719	6K			
	571710	7K			
25	677745	DOE/NNSA Firing Range	Weapons training	National Training Center (NTC)	845-5170 x 639
26	703730	DOE/Sandia Cable Site	Research and development	DOE/Sandia National Laboratories,	844-2473

				(Dept 1534)	844-6229
27	714745	DOE/Sandia Burn Site	Research and development	DOE/Sandia National Laboratories, (Dept 1532)	844-2473 844-3387
28	671727	DOE/Sandia Explosives Facility Test 9990	Not Active	DOE/Sandia National Laboratories	
29	1: 699681	58th SOW Helicopter Training Areas "1-4"	Maneuvers and training Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes.	58th SOW Airspace Manager	853-5979
	2: 708709				
	3: 738732				
	4: 739701				
30	590730 (Center)	DOE/Sandia Tech Area III	Research and development	DOE/Sandia National Laboratories, (Dept 1534)	844-2473 844-6229
31	606718	DOE/Sandia Explosives Test Facility 9920	Research and development	DOE/Sandia National Laboratories, (Dept 4117)	844-8392
32	679692	AFRL Laser Range 12K – Target Location	Research and development	AFRL/RDOT	846-7734
33	613723	DOE/Sandia Explosives Facility Test 9940, Area Y	Research and development	DOE/Sandia National Laboratories, (Dept 5915)	844-5274
34	621719	DOE/Sandia Explosives Facility Test 9960	Research and development	DOE/Sandia National Laboratories, (Dept 141813)	845-3363
35	606726	DOE/Sandia Explosives Facility Test 9950	Research and development	DOE/Sandia National Laboratories, (Dept 1647)	284-3185
36	539786	377 MSG/CEF Fire Training Facility	Aircraft Fire Training Exercises	377 MSG/CEF	846-8220

37	574694 (Center)	Auxiliary Helicopter Training Field (Aux Field)	Helicopter Training Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes.	58th OSS/DOO [Airspace Management]	853-5979
38	680703	High Energy Research and Technology Facility (HERTF) Frustration Canyon	Research and development	AFRL/RDHA	off: 8537903 alt: 846-5496
39	624714	DOE/Sandia Explosives Facility Test 9939	Research and development	DOE/SANDIA	845-3264
40	614715	DOE/Sandia Explosives Facility Test 9930	Research and development	DOE/SANDIA	845-3264
41	655733	377 ABW Training Area: Old Bivouac Area 3 Training Site	Blank/SIM ammunition, Ground Burst Simulators (GBS), Smokes. Maneuvers and Training	377 ABW/SEW	846-9142 846-4229
42	671699	Starfire Optical Range (SOR) MATS Alpha site	Research and development	AFRL/RDOT	846-7734